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ABSTRACT

Although case studies and anecdotal information have suggested that differences exist between the early family environments of obese and non-obese individuals, no experimental research exists. Undergraduates completed the Family Environment Scale (FES) and a questionnaire concerning past and present weight information. Subjects were classified as obese (N=62) or non-obese (N=17) by use of standard actuarial tables of height-weight-frame size norms. Data analysis revealed significant interactions for three sub-scales of the FES, relative to subject sex. Male obese subjects were higher than non-obese males in Expressiveness and Active-Recreational Orientation, while obese females were greater than non-obese females on the Conflict dimension. Findings indicate that differences between the early family environments of obese and non-obese individuals exist. However, results also suggest that sex differences are an important moderating factor in determining the impact of family variables. (Author/NRB)

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Early Family Environments of Obese and Non-Obese College Students

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Running Head: Obese and Non-obese Students

Early Family Environments of Obese and Non-Obese College Students

Forty years ago Hilde Bruch began to publish results of her studies of the families of obese children. Her findings have been widely disseminated and accepted. She concluded that mothers of obese youngsters feel a fundamental rejection toward their children and compensate for this by overprotective measures and excessive feeding (Bruch and Touraine, 1940). She stated that developmental obesity occurs in children who are shielded from, or not trusted with, the ordinary tasks of life (Bruch, 1978).

Her work is based almost entirely on case studies and anecdotal information. A review of the literature revealed no experimental test of the hypothesis that early family environments of obese individuals are different than those of non-obese individuals. The present study was an attempt to determine if such differences exist.

Method

Subjects

One hundred seventy-nine subjects (48 males and 131 females) were recruited from undergraduate psychology classes. Mean age of the subjects was 21.1 years.

A short questionnaire was used to obtain information regarding subjects' weight. The subjects were asked to indicate a) their present height, b) present weight, c) if they had ever considered themselves overweight, d) the time span during which they had considered themselves overweight, and their weight at the time they had considered themselves overweight.

In order to assess aspects of early family environments, the Family

Environment Scale - Form R (FES) was used (Moos, 1974). According to Moos the FES focuses on the measurement and "description of the interpersonal relationships among family members, on the directions of personal growth which are emphasized in the family, and on the basic organizational structure of the family" (Moos, 1974, p. 3). Scores on the 10 subscales generated by the FES range from zero to nine, a higher number indicating greater levels of a particular dimension in that family.

Procedure

Subjects were first asked to read and sign a consent form, if they wished to participate. They were then instructed to complete the demographic questionnaire and the FES. Subjects were instructed to complete the FES relative to their family of origin. Subjects were then thanked and dismissed.

Results

Subjects were classified as obese or non-obese using standard actuarial tables of height-weight-frame size norms (Metropolitan Life Insurance Company, 1959). Subjects whose reported maximum weight exceeded the maximum desirable weight for a large frame individual at their height were classified as obese. Subjects who did not meet this criteria were classified as non-obese.

A 2 X 2 ANOVA for independent groups (sex X weight group) was computed on each subject's age. No significant differences were found, indicating that the groups were comparable on this variable. Identical analyses were computed for each of the 10 subscales of the FES. None of the analyses produced significant main effects. However, significant interaction effects were present on the three subscales of Expressiveness, $F(1,175) = 7.14$, $p < .01$; Conflict, $F(1,175) = 5.80$, $p < .02$; and Active-Recreational Orientation, $F(1,175) = 10.64$, $p < .002$. Table 1 shows mean FES scores for each group on these three subscales. These means are also plotted in Figure 1.

Insert Table 1 and Figure 1 about here

These data were further analyzed with t tests for independent groups to determine where the differences were. The Expressiveness subscale assesses the extent to which family members are allowed and encouraged to act openly and to express their feelings directly. Obese males scored significantly higher than non-obese males on this scale, $t(46) = 3.12$, $p < .01$, whereas the scores of female subjects were in the opposite direction (non-obese higher than obese), although the differences were not statistically significant, $t(129) = .53$, $p > .05$. This same pattern of differences for males, $t(46) = 3.39$, $p < .002$, but not for females, $t(129) = 1.42$, $p > .05$, was evident on the Active-Recreational Orientation subscale, which assesses the extent to which the family participates actively in various kinds of recreational and sporting activities On the Conflict subscale, which assesses the extent to which the open expression of anger and aggression are characteristic of the family, obese females scored significantly higher than non-obese females, $t(129) = 3.18$, $p < .002$, while differences for males were in the opposite direction and nonsignificant, $t(46) = .44$, $p > .05$.

Discussion

The present study provides evidence that there are differences between the early family environments of obese and non-obese individuals. However, these results also suggest that sex differences are an important moderating factor in determining the impact of family variables.

The higher levels of conflict found in families of obese females is consistent with Bruch's (1973, 1978) assertion that obese children have dominant and overbearing mothers, who tend to control their children and do

not allow them to develop a sense of autonomy. It seems somewhat surprising that the obese male subjects showed higher levels of expressiveness and recreational orientation than non-obese males. One reason for higher recreational orientation scores may be that these particular overweight males may have consisted of athletic type individuals, who view their added body weight as an advantage in various contact sports in which they are actively involved.

The present study illustrates the need for more research directed toward the personality correlates of obesity in overweight children rather than adults, as these results suggest that patterns characteristic of the families of obese individuals develop early on in a person's life. Another direction for future research could be to employ more objective methods for determining obesity and non-obesity when assessing early family environments.

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Table 1

Mean score on three subscales of the

Family Environment Scale (FES)

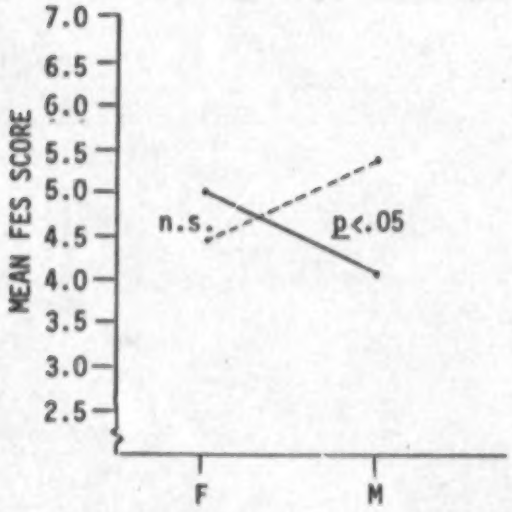
	Nonobese				Obese			
Subscale	Male(n=31)		Female(n=86)		Male(n=17)		Female(n=45)	
	M	SD	M	SD	M	SD	M	SD
Expressiveness	4.55	2.06	5.50	2.00	5.82	1.74	4.96	1.74
Active Recreational Orientation	4.90	2.18	5.91	2.23	6.41	1.77	4.91	2.19
Conflict	3.26	2.41	2.72	2.36	2.24	2.11	3.64	2.11

NOTE: Scores range from 0 to 9.

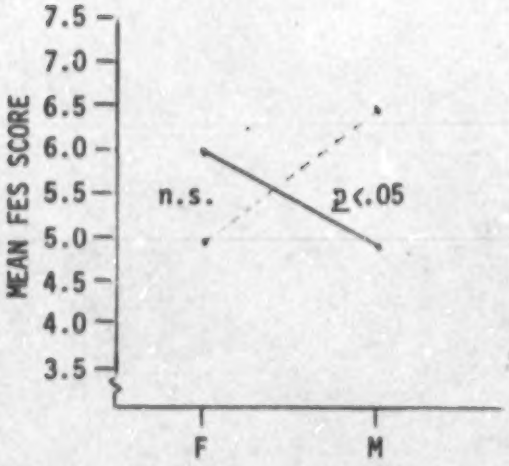
Figure Caption

Figure 1. Mean FES scores on three subscales - significant sex X weight group interactions.

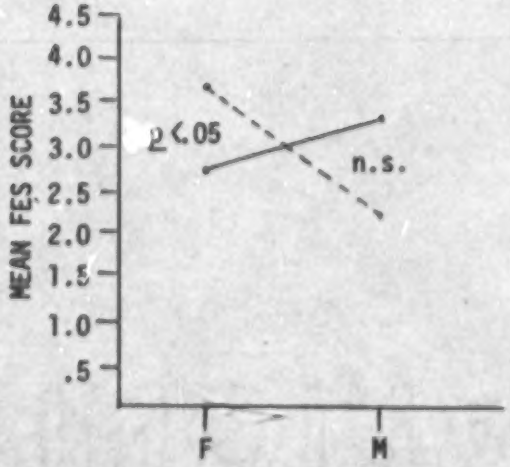
SIGNIFICANT SEX X WEIGHT GROUP INTERACTIONS



EXPRESSIVENESS



ACTIVE RECRECATIONAL ORIENTATION



CONFLICT

———— NON-OBESE

---------- OBESE